marvel at the universal prejudice with which the weather forecast is received. We are all keeping an accurate record of Professor McAdie's daily forecast for our valley, and ascertaining by direct observation how often he makes mistakes. We have found it very interesting *and we are all more loyal supporters of this department of the Government than before the experiment."—C. A. jr.*

WEATHER BUREAU METEOROLOGICAL CHARTS OF THE OCEANS.

In May, 1871, the U. S. Signal Service sent out its first circulars addressed to shipowners and captains, in which it was requested that regular and simultaneous (tridaily) meteorological observations be maintained on shipboard for the benefit of commerce and science. Lieut. M. F. Maury, U. S. N., had previously collected and plotted the data from a large number of ships' logs for the foundation of his work, "The Physical Geography of the Sea," and in 1876 the Secretary of the Navy ordered simultaneous meteorological observations to be made on all naval vessels, this being gradually extended to the merchant marine.

For a number of years the U. S. Hydrographic Office of the Navy Department has published pilot charts of the North Atlantic and North Pacific oceans, showing meteorological features based on data collected and prepared in part by that office and in part by the U. S. Weather Bureau; but from 1875 to 1887, inclusive, the data was furnished by the U. S. Signal Service.

In 1887 the U. S. Signal Service turned over the collection and tabulation of ocean meteorological observations to the Hydrographic Office, and that office continued, as previously, its publication of the means and normals prepared by the U. S. Signal Service, until July 29, 1904. In that year the Inter-Departmental Board, appointed by the President, recommended[1]

That all meteorological reports from vessels of war or commerce or other sailing craft, now being forwarded direct to the Hydrographic Office of the Navy, shall be forwarded direct to the Weather Bureau, and the control of ocean meteorology be transferred to the Department of Agriculture, which already has ample law for doing that work;

That the estimates for the support of the Hydrographic Office of the Navy, or any other office of the Navy, for the next and succeeding fiscal years, do not contain any provision for the making of ocean forecasts, or for the publication of meteorological data, other than such as may be needed by the Hydrographer of the Navy for use on the pilot and other charts, which data shall be furnished by and credited to the Weather Bureau.

That it is the opinion of this Board that no meteorological work need or should be done by any portion of the Navy for the purpose of publication, or for the making of forecasts or storm warnings; that all such duties, being purely civil, should devolve upon the Weather Bureau of the Department of Agriculture in accordance with the organic act creating that Bureau.

The President approved this recommendation and by executive order the collection and tabulation of all meteorological data now published on the pilot chart of the Hydrographic Office has been prepared and furnished by the U. S. Weather Bureau.

Immediately on the resumption of this work by the Weather Bureau the entire meteorological data, pressure, temperature, wind-roses, storm tracks, gale percentages, calms, percentage of fog, trade wind limits, and the average conditions of wind and weather, for the North Atlantic and North Pacific monthly charts, were brought up to January 1, 1908; and this Bureau furnished in May, 1909, the first meteorological data for a seasonal pilot chart of the South Atlantic Ocean that has ever been issued by any Government.

From 1865 to 1887 the monthly reports received from vessels distributed over the principal marine highways of the globe was only 600, while at the present time, the greater interest in this branch of ocean meteorology has increased the number to over 2,000.

We take pleasure in drawing the attention of all our readers to the following notice recently issued by the Chief of the Marine Division of the Weather Bureau, relating to a new series of meteorological charts for the Atlantic and Pacific oceans.—*C. A. jr.*

U. S. DEPARTMENT OF AGRICULTURE,
WEATHER BUREAU,
MARINE DIVISION. *Washington, D. C., May 10, 1909.*

NOTICE.

Beginning with the month of July, 1909, meteorological charts of the North Atlantic and North Pacific oceans monthly, and South Atlantic Ocean quarterly, will be issued for distribution to cooperating shipmasters and others interested in ocean meteorology. The issue will include a seasonal chart of the South Pacific Ocean, September next.

The Bureau receives reports from 2,100 observers on vessels of every nationality, and from these reports prepares daily synoptic charts of the meteorological data, being thus enabled to plot the meteorological conditions prevailing over the oceans from day to day for the purpose of tracing storm tracks, percentage of fog, prevailing direction of wind, trade wind limits, pressure, and temperature.

There will be no charge for these charts. Some of them will be mailed direct from the Central Office to observers and captains on vessels, and others will be sent to American consuls and to branch Weather Bureau stations named on the list in form 1201—Marine, for distribution to such observers and captains as may not receive a copy from this office.

The Chief of the Weather Bureau would be pleased to receive from each captain or observer, on the inclosed card, a permanent address, preferably an address in the United States, to which the charts should be mailed each month.

The American representatives at the various ports are requested to kindly inform the Bureau as to the number of charts of each ocean that should be sent them for distribution to vessels touching at their ports.

It is the desire of the Chief of the Weather Bureau to popularize the charts and make them of benefit in a meteorological sense to those using them. With that end in view, any suggestion looking to their improvement will be appreciated.

Very respectfully, HENRY L. HEISKELL,
Chief of Division.

THE CUTHBERT, GA., TORNADO.

By C. F. VON HERRMANN, Section Director. Dated Atlanta, Ga., March 24, 1909.

The storm that did so much damage at Cuthbert, Randolph County, Ga., on the evening of March 9, 1909, seems to have been a veritable tornado. However, the night was so dark, with rain and wind, and the time of its passage so short that the funnel-shaped cloud was probably not actually observed by anyone. The storm was apparently not one of a group, but an isolated phenomenon formed under unusual conditions, though the center of the main barometric depression lay north of Chicago, Ill.

On the morning of March 9 a barometric depression of considerable depth was central near St. Louis, Mo., where the 7 a. m., central time, pressure was 29.34 inches. There was a peculiar trough or prolongation of low pressure that extended down the Mississippi Valley, or rather just east of the river, to New Orleans, La., where the pressure was 29.68 inches with southeast winds and a temperature of 72°. Meridian, Miss., reported a pressure of 29.64 inches and a temperature of 68°, while Vicksburg, Miss., just across the State had 29.72 inches, with a temperature of 50°, indicating sharp contrasts in temperature on each side of the trough of low barometer. At 7 p. m. the center of the depression had moved north of Chicago, Ill.; the trough of the low still extended south to the coast of the Gulf of Mexico, but had advanced to eastern Alabama. At 7 p. m. the temperature was 70° at Thomasville, Ga., with south winds, 62° at Atlanta, Ga., with southwest winds, but the wind had already shifted to west at Mobile and Montgomery, Ala., and the weather was clear at New Orleans, La., and Vicksburg, Miss. Thus the tornado occurred at the moment the trough of low pressure passed Cuthbert, Ga., and not in the southeast quadrant of the storm.

The track was not very long. It seems to have commenced

[1] See the article "Ocean Meteorology." Monthly Weather Review, 1904, 32:327.